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ABSTRACT

This study attempted to identify indicators of success for developmental education students, particularly underprepared African American students enrolled at a predominantly Black university. The sample for the study included 922 students who responded to an 8-item questionnaire, which consisted of both traditional and non-traditional variables. The variables included gender, race, race of high school teachers, number of years of high school mathematics, number of years of high school English taken, student's plan to go to college, sources of assistance in high school, whether the student felt prepared for college, intended college major, intended minor, place of origin, credit hours attempted, credit hours completed, and placement scores. Commonality analyses were undertaken and the development of a linear structural equations model is proposed. The results of the ongoing study suggest the importance of monitoring students so that they register for an appropriate number of credit hours and an appropriate combination of courses. Included are 2 tables, an appendix containing the questionnaire, and 17 references. (Author/JB)

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Critical Determinants for Preparing Black Students for College: Research and Policy Considerations

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SIG/Research Focus on Black Education-Symposium

Predictors of Success for Developmental Students

by

Wilton A. Barham, Grambling State University

Paper presented at the Annual Meeting of the American Educational Research Association

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Table of Contents

I. Introduction 3

II. Method 4

III. Results 8

IV. Discussion 10

V. References 13

SUMMARY

Predictors of Success for Developmental Students

During the nineteen sixties and seventies when colleges began to enroll more students with different levels of academic preparation, researchers began to increase their efforts to identify predictors of success among traditional measures such as standardized test scores, high school rank, locus of control, and high school grades (Stanley & Porter, 1967; Breland, 1978; Lunneborg & Lunneborg, 1986; Sowa, Thomson & Bennett, 1989; Talbot, 1990). Some studies examined the predictive power of non-traditional variables such as motivation, reasons for attending college, goals of black students, ability attributions for high school success, and effort attributions (Tracey & Sedlacek, 1985; Sowa, Thomson & Bennett, 1989, Platt, 1988). Much of the research studies conducted during the above-mentioned periods were done to determine whether traditional admissions policies were racially discriminatory (Sowa et al., 1989). The raising of admissions standards in the nineteen eighties and the policy of open-admissions are additional reasons given for the continued investigations of the predictors of academic achievement of college students.

Most of the studies that have been conducted with the emphasis on the prediction of students' academic achievement have focused on regularly admitted students. However, open-admissions brought to many campuses a large number of students who are considered underprepared. These are students who are more likely to experience academic difficulties and are therefore required to enroll in developmental education courses upon entering college. The major objective of this study is to identify the indicators of success for developmental education students.

The population for this study was students enrolled in developmental education course(s) at a predominantly Black university during Spring 1988. Nine

hundred and twenty two (922) students who responded to an eight item questionnaire, which consisted of both traditional and non-traditional variables, formed the sample for the study. The following variables were selected as independent variables in a multiple linear regression model to estimate their predictive relationship with a dependent variable, college cumulative grade point average (GPA): gender, race of student, race of high school teacher (same as students'), number of years of high school mathematics taken, number of years of high school English taken, student's plan to go to college, sources of assistance in high school, whether student feels he/she was adequately prepared for college by high school, intended college major, intended college minor, place of origin, credit hours attempted, credit hours completed, ACT-English, ACT-Mathematics, ACT-Social Science, ACT-Natural Science, and ACT-Composite scores. Commonality analyses were undertaken to ascertain the unique contributions of the independent variables, particularly those that were significant. A linear structural equations model is also proposed using LISREL applications and some of the above variables as manifest variables (Joreskog & Sorbom, 1989; Fassinger, 1987; Husen & Tuijnman, 1991).

Pearson Product Moment correlations (r) which indicate bivariate relationships between interval-level dependent and independent variables were calculated. The strongest predictors of GPA at the bivariate level are credit hours attempted (r=.359), credit hours completed (r=.621), ACT-English (r=.190), ACT-Mathematics (r=.176), ACT-Social Science (r=.288), and ACT-Composite (r=.212); all were significant at the .01 level. These correlation coefficients suggest that students with high cumulative GPA have attempted a large number of credit hours, completed a large number of credit hours, and have high ACT-English, ACT-Mathematics, ACT-Social Science, and ACT-Composite scores. The multivariate regression coefficients provide stronger inferences than the

correlation coefficients and the analysis of the model reveals that students who achieve high GPA would have attempted less credit hours and eventually completed most of them. The eighteen-variable model accounted for 72.70% of the variance in GPA ($F=44.097$, R square= .7270, $p < .01, .05$). Credit hours attempted and credit hours completed accounted for 10.21% and 47.34% of the variance in GPA respectively. The results of this ongoing study to define developmental education students indicate that students should be carefully monitored so that they register for the appropriate number of credit hours which would maximize their chances of completing more of them and eventually gain their college degrees. Because of limitations with multiple regression models, it is proposed that a linear structural equations model (LISREL) be developed to estimate the effect of high school experience on students' college achievement.

I. Introduction

Colleges and universities have instituted varying academic admission guidelines for admitting students into their hallowed halls. These vary from the reliance on very selected objective measures of students' academic success to open admissions criteria (more reliance on a combination of quantitative and qualitative measures). The fact that many colleges and universities regularly review these criteria indicate that their estimating or predictive power change as the population of entering freshmen change. Consequently, overall college performance may vary over time. Therefore, it remains necessary to conduct studies to investigate the predictors of academic success of college students in an attempt to identify the most stable and effective predictors.

During the nineteen sixties and seventies when colleges began to enroll more students with different levels of academic preparation, researchers began to increase their efforts to indentify predictors of success among the traditional measures such as standardized test scores, high school rank, locus of control, and high school grades (See Stanley and Porter, 1967; Breland, 1978; Lunneborg & Lunneborg, 1986; Sowa, Thomson & Bennett, 1989; Talbot, 1990). Some studies examined the predictive power of non-traditional variables such as motivation, reasons for attending college, goals of Black students, ability attributions for high school success, and effort attributions (Tracey & Sedlacek, 1985; Sowa,Thomson & Bennett, 1989; Platt 1988). Much of the research conducted during the above-mentioned periods to predict academic perfomance or achievement were done to determine

whether traditional admissions policies were racially discriminatory (Sowa et al., 1989). The raising of admissions standards in the nineteen eighties and the policy of open-admissions are additional reasons given for the continued investigations of the predictors of academic achievement. Most of the studies that have been conducted with the emphasis on the prediction of students' academic achievement have focused on regularly admitted students. However, open-admissions brought to many campuses a large number of students who are considered underprepared. These are students who are more likely to experience academic difficulties and are therefore required to enroll in developmental education courses upon entering college. The major objective of this study is to identify the indicators of success for underprepared students. This paper discusses preliminary results of an ongoing effort to define the developmental learner with the help of empirical information. In other words, we seek to develop a profile of the developmental education student.

II. Method

Sample and Instrumentation

The population for this study was students enrolled in developmental education course(s) at a predominantly Black university during Spring 1988. The students were asked to complete an eight item questionnaire (see Appendix A) which consisted of both traditional and non-traditional variables. Questionnaires were distributed and collected by teachers in the developmental education course(s) in which students were registered. Nine hundred twenty two (922) students who

responded formed the sample for this study. Students enrolled in more than one course were required to complete the questionnaire only once.

Data Analysis

Data were collected on the following variables by way of the questionnaire: high school attended, location of high school, gender, race of student, race of high school teacher, number of years of high school mathematics taken, number of years of high school English taken, students' plan to go to college, sources of advice in high school, whether student feels that he/she was adequately prepared for college by high school, subject area in which they intended to major, and subject area in which they intended to minor. A final question asked students to describe the "best" teacher that they ever had. Permission was granted to retrieve the following information from students' records: ACT composite and subscores, grades of developmental education courses in which students' were enrolled, place of origin, credit hours attempted, credit hours completed, and cumulative grade point average. Students' confidentiality was maintained through the use of their social security number as a coding device.

Eighteen (18) variables were selected as independent variables in a multiple linear regression model to estimate their predictive relationship with a dependent variable, college cumulative grade point average. The variables that were included in the model and findings from previous research are the following:

1. Gender was coded as 1) Male and 2) Female. Studies which have attempted to determine predictors of academic achievement for males and females have been conducted. Kanoy, Wester, and Latta(1989)

have reported that for a group of females who were expected to do well in college (around 3.0 to 3.7), high school GPA and academic self concept formed the most powerful multiple linear regression model and predicted 56% of the variance in GPA; for those expected to perform in the 2.0 range, none of the traditional predictors(e.g. SAT scores, high school GPA) was effective in predicting freshman year GPA. Nettles, Thoeny and Gosman (1986) have reported results of multivariate analyses where students with high college GPAs have been female, are members of the racial majority on their campuses, have high high-school grade point averages, and have high SAT scores, among others.

2. Race was coded as 1) Afro-American, 2) Caucasian, and 3) Other. Nettles, Thoeny and Gosman (1986) have demonstrated that SAT scores, student satisfaction, peer group relations, and interfering problems have differential impacts on the college grade point average of black and white students. SAT scores tend to overpredict black students' college GPAs. Other studies in which race was a variable include Stanley and Porter (1967), Cleary (1968), Stanley (1971), Hashway and Hashway (1991) and Smith (1986).

3. How many of the students' high school teachers was the same race as students was coded as 1) Most, 2) Half of them, 3) Less than half of them, and 4) None. This variable was included to see if race of high school teacher which was the same as students might have an effect on students' college performance.

4. Years of Math: Number of years in which at least one math course was taken was coded as 1) Four years, 2) Three years, 3) Two years, and 4) One or less year. Rogers, Hashway, Gamble, Jackson and Hashway (1991) and Hashway, Rogers, Jackson and Barham (in

press) have indicated that if students took three or four years of mathematics and/or science in high school, they are more likely to perform better in college than those who had fewer years of both subjects.

5. Years of English: This was coded the same way as number of years of mathematics.

6. Plan to go to college: Students were asked to indicate 1)Yes or 2) No as to whether they did plan to go to college during high school. This non-traditional variable was hypothesized as likely to predict college achievement well. Sowa et al. (1989) reported that reasons for attending college, extra-curricula participation in high school, motivation, and goals of black students were better predictors of academic performance than were past high school performance or standardized test scores.

7. Sources of assistance: Students were asked to indicate whether 1) Counselor, 2) Teacher, 3) Parent(s) or Relative, or 4) Other persons assisted them in high school. All possible combinations were also coded because students answered more than one category.

8. Adequacy of high school preparation: Students were required to answer 1) Yes or 2) No, if their high school adequately prepared them for college.

9. Intended college major: This variable was coded 01) Business to 82) Industrial Technology.

10. Intended college minor: Coded the same as college major.

11. Place of origin: This variable was coded to reflect parishes in Louisiana and non-Louisiana parishes. That is, the codes were 01) Acadia parish to 65) Out of state.

12. Hours attempted: Number of actual credit hours attempted since first semester of enrollment in college was recorded.

13. Hours completed: Number of actual credit hours completed since first semester of enrollment was recorded.

14. ACT-English subscore.

15. ACT-Mthematics subscore.

16. ACT-Social Science subscore.

17. ACT-Natural Science subscore.

18. ACT-Composite score. ACT composite and subscores and SAT scores have been used as traditional predictors in predictive models of students' acdemic achievement [Kanoy et al., 1989; Sowa et al., 1989; Nettles et al., 1986; Hashway et al., (in press)].

19. Cumulative GPA after last enrolled semester was used as the measure of academic achievement, the dependent variable. (Nettles et al., 1986; Kanoy et al., 1989; Rogers et al., 1991; Sowa et al., 1989). In addition to the use of a multiple linear regression model, commonality analyses were undertaken to ascertain the unique contributions of the independent variables, particularly those that were significant at the .01 and .05 levels. A linear structural equations model is also proposed using LISREL applications and some of the above variables as manifest variables. (Joreskog & Sorbom, 1989; Fassinger, 1987; Husen & Tuijnman, 1991).

III. Results

The frequency distributions of the dependent and independent variables are presented in Table 1. The sample size vary for different variables because of nonresponse or incomplete information on some

students in the sample. The mean GPA was 2.187 (N=435). Fifty seven point three percent (57.30 %) of the sample was females and 42.60% was males. The number of students who had four and three years of mathematics in high school was the same in both cases (N= 391) whereas 85.2% had four years of English and 11% had three years of English. Eighty-two point two percent (82.2%) of the sample planned to go on to college. Other information that can be gleaned from Table 1 are: 1) The average number of credit hours attempted is 102.14; 2) The average number of credit hours completed is 91.44; 3) The mean ACT-English score is 10.77; and 4) The mean ACT-Mathematics score is 6.73.

To illustrate the bivariate relationships between the dependent and independent variables, Table 2 shows the Pearson Product Moment correlation coefficients (r) for the interval level independent variables in the multiple linear regression equation. The strongest predictors of GPA at the bivariate level are credit hours attempted (r=.359), credit hours completed (r=.621), ACT-English (r=.190), ACT-Mathematics (r=.176), ACT-Social Science (r=.288), and ACT-Composite (r=.212); all were significant at the .01 level. These correlation coefficients suggest that students with high cumulative college grade point averages have attempted a large number of credit hours, completed a large number of credit hours, and have high ACT-English, ACT-Mathematics, ACT-Social Science, and ACT-Composite scores.

The multivariate regression coefficients (standardized) also shown in Table 2 provide stronger inferences than the correlation coefficients, because these coefficients represent the independent effect of each variable while the others are controlled simultaneously. Not all the variables that were significant at the bivariate level produce

significant regression coefficients. The analysis reveals that students with high GPAs have attempted less credit hours over the semesters and eventually have completed more of them. In other words, students' high academic achievement is predicated on attempting fewer credit hours each semester and completing most of them. Even though ACT-English, ACT-Mathematics and ACT-Social Science scores had significant correlations, they were not significant predictors of GPA. The 18 variables in the model account for 72.70% of the variance in GPA (F=44.097, R square=.7270).

When ACT-Composite score, credit hours attempted, and credit hours completed are excluded from the model, the remaining 15 variables account for only 14.676% of the variance in GPA. Further commonality analysis, a method of variance partitioning, indicates that ACT-composite score accounts for .48%, number of credit hours attempted accounts for 10.21%, and number of credit hours completed accounts for 47.34% of the variance in GPA.

IV. Discussion

This study is an ongoing examination of data collected on entering undergraduate students at a predominantly Black university. These students are part of a group who have been recommended to take one or more developmental education courses (e.g. English, mathematics or reading). This author is part of a team of researchers that is attempting to define the developmental learner by analyzing related data as an initial approach to the identification of an adequate model to predict the success of these learners. The results of this initial effort indicate that students should be carefully monitored so that they

register for the appropriate number of credit hours which will ensure their success towards the completion of their studies. Not only should they take an appropriate course load but the combination of courses should be taken into consideration. If students are given appropriate counseling, academic assistance and other support to "connect" them with the university, they should have successful experiences.

Because of limitations with the multiple regression model with regards to measurement issues, intercorrelations of independent variables, and other problems with internal and external validity, it is proposed that a linear structural equations model be developed and tested to estimate the effect of high school experience on students' college achievement. A LISREL model could indicate hypothesized relationships between latent variables such as academic support, precollege preparation, decision related to college attendance, high school educational attainment, and college academic achievement. A theoretical model of these five latent variables could utilize the following manifest variables to measure the latent variables (Joreskog & Sorbom, 1989; Husen & Tuijnman, 1991; Fassinger, 1987):

1. Academic support: Sources of support and race of teachers;

2. Precollege preparation: Years of mathematics, years of English, adequacy of preparation in high school, and high school location;

3. High school educational attainment: ACT-English, ACT-Math, ACT-Social Science and ACT-Natural Science;

4. Decision related to college attendance: Plan to attend college; and

5. College academic achievement: GPA, credit hours attempted, and credit hours completed. This analytic approach could help to

determine whether GPA or credit hours completed, for example, are adequately defining the latent structure, academic achievement. This is necessary since hours attempted and hours completed are significantly correlated with GPA.

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Table 1

Frequency Distribution of Dependent and Independent Variables

Used in Multiple Regression Analysis

Variables	Frequency	Percent	Mean	Standard Deviation	N
Dependent Variable					
GPA	435	100.00	2.187	.472	435
Independent Variable					
Gender					922
Male	393	42.60			
Female	528	57.30			
Race					920
Afro-American	829	90.1			
Caucasian	8	.9			
Other	3	.3			
Same Race Teacher					922
Most	305	33.1			
Half	179	19.4			
Less than Half	357	38.7			
None	81	8.8			
Years of Math					922
Four Years	391	42.4			
Three Years	391	42.4			
Two Years	119	12.9			
One or Less	21	2.3			
Years of English					922
Four Years	786	85.2			
Three Years	101	11.0			
Two Years	20	2.2			
One or Less	15	1.6			
Plan to go to College					922
Yes	758	82.2			
No	152	16.5			
Source of Assistance					922
No one	22	2.4			
Other	1	.1			
Parents & Others	154	16.7			
Counselor/Teacher	6	.7			
Counselor/Teacher/Parent	43	4.7			

Variables	Frequency	Percent	Mean	Standard Deviation	Number
Counselor/Teacher/Parent/Other	16	1.7			
Counselor/Teacher/Other	1	.1			
Counselor & Parent	73	7.9			
Counselor/Parent/Other	7	.8			
Counselor & Other	7	.8			
Teacher	36	3.9			
Teacher & Parent	29	3.1			
Teacher/Parent/Other	3	.3			
Parent/Relative	424	46.0			
Parent & Other	16	1.7			
Other	84	9.1			
Adequacy of Preparation					922
Yes	575	62.4			
No	325	35.2			
College Major					901
None	42	4.7			
Business	30	3.3			
Computer Info Sys	50	5.5			
Accounting	54	6.0			
Management	78	8.7			
Marketing	30	3.3			
Office Admin	21	2.3			
Word Process	1	.1			
Education	14	1.6			
Elem Ed	28	3.1			
Spec Ed	1	.1			
Bus. & Off. Ed	1	.1			
English Ed	4	.4			
Early Child Ed	8	.9			
Home Ec Ed	2	.2			
Math Ed	1	.1			
Music Ed	3	.3			
Science Ed	1	.1			
Health & Phys Ed	14	1.6			
Art	4	.4			
Speech & Theatre	2	.2			
English	5	.6			
Geography	2	.2			
History	2	.2			
Journalism	11	1.2			
Music (appl)	6	.7			
Pol Sci	34	3.8			
Psych	38	4.2			
Radio & TV	25	2.8			
Soc Sci	4	.4			
Sociology	6	.7			
Speech & Path	3	.3			
Theatre	1	.1			

Variables	Frequency	Percent	Mean	Standard Deviation	Number
Mass Com	15	1.7			
Criminal Justice	75	8.3			
Nursing	60	6.7			
Child Dev	4	.4			
Math	4	.4			
Biology	20	2.2			
Chemistry	1	.1			
Physics	3	.3			
Drafting	2	.2			
Electronic Tech	23	2.6			
Computer Sci	59	6.5			
Hotel Man	9	1.0			
Auto Tech	3	.3			
Building Const	1	.1			
Medical Therapy	3	.3			
Phys Therapy	18	2.0			
Cardiopul Sci	1	.1			
Occup Ther	4	.4			
Food Pro Man	2	.2			
Draft & Des (EM)	3	.3			
Draft & Des (EA)	8	.9			
Auto Tech	3	.3			
Man Eng	1	.1			
Soc Wk	38	4.2			
Public Admin	4	.4			
Rehab Counseling	3	.3			
Engineering	5	.6			
Pre-Dent	1	.1			
Industrial Tech	2	.2			
College Minor					895
None	373	41.7			
Business	42	4.7			
Comp Info Sys	15	1.7			
Account	29	3.2			
Man	52	5.8			
Marketing	27	3.0			
Off Admin	7	.8			
Word Process	2	.2			
Gen Cl	3	.3			
Econ	2	.2			
Ed	17	1.9			
Elem Ed	10	1.1			
Spec Ed	2	.2			
Art Ed	1	.1			
Bus & Off Ed	2	.2			
Eng Ed	1	.1			
Ea Ch Ed	4	.4			
Home Ec Ed	1	.1			
H & Phys Ed	27	3.0			

Variables	Frequency	Percent	Mean	Standard Deviation	Number
Aging	1	.1			
Art	5	.6			
Sp & Thr	3	.3			
English	15	1.7			
French	2	.2			
History	5	.6			
Journalism	10	1.1			
Music (Appl)	14	1.6			
Pol Sci	17	1.9			
Psyc	21	2.3			
Radio & TV	16	1.8			
Soc Sci	1	.1			
Soc	9	1.0			
Spanish	6	.7			
Speech Path	1	.1			
Thr	1	.1			
Mass Com	13	1.5			
Crim Jus	27	3.0			
Nursing	5	.6			
Science	1	.1			
Child Dev	11	1.2			
Math	15	1.7			
Bio	4	.4			
Drafting Tech	1	.1			
Elec Tech	3	.3			
Comp Sci	35	3.9			
Hotel Man	9	1.0			
Phys Therapy	1	.1			
Occ Therapy	1	.1			
Food Prod	2	.2			
Drafting (EA)	1	.1			
Soc Work	13	1.5			
Afrotc	3	.3			
Pub Admin	1	.1			
Engineering	3	.3			
Photo	1	.1			
Orinthology	1	.1			
Place of Origin					451
Acadia	4	.9			
Allen	1	.2			
Ascen	2	.4			
Assum	2	.4			
Avov	4	.9			
Beauregard	2	.4			
Bienville	12	2.7			
Bosier	4	.9			
Caddo	25	5.5			
Calcaieu	4	.9			

Variables	Frequency	Percent	Mean	Standard Deviation	Number
Catahoula	1	.2			
Claiborne	11	2.4			
Concordia	3	.7			
Desoto	5	1.1			
E. Baton R	3	.7			
E. Carrol	3	.7			
E. Feliciana	1	.2			
Franklin	8	1.8			
Grant	3	.7			
Iberia	2	.4			
Iberville	1	.2			
Jackson	8	1.8			
Jefferson	3	.7			
Jefferson Davis	1	.2			
Lafayette	1	.2			
Lafourche	2	.4			
Lincoln	12	2.7			
Madison	12	2.7			
Morehouse	4	.9			
Natchi	7	1.6			
Orleans	17	3.8			
Ouachita	19	4.2			
Plaq	1	.2			
Pointe C	2	.4			
Rapides	14	3.1			
Richland	4	.9			
Sabine	1	.2			
St. Charles	2	.4			
St. Helen	2	.4			
St. James	3	.7			
St. Landry	10	2.2			
St. Martin	1	.2			
Tangi	8	1.8			
Tensas	6	1.3			
Terre	2	.4			
Union	6	1.3			
Verm	1	.2			
Vernon	3	.7			
Washington	3	.7			
Webster	17	3.8			
Winn	8	1.8			
Out of State	170	37.7			
Hours Attempted	435	100.00	102.14	22.368	435
Hours Completed	435	100.00	91.44	25.336	435
ACT-English	391	100.00	10.77	4.70	391

ACT-Math	390	100.00	6.73	3.93	390
ACT-Social Science	345	100.00	8.06	4.25	345
ACT-Natural Science	346	100.00	12.25	4.16	346
ACT-Composite	382	100.00	9.72	2.97	382

Table 2

Regression of Students' Academic Performance (GPA) on Students' High School and College Characteristics

Independent Variables(a)	B(b)	Beta(c)	t	r	N
Gender (1=Male, 2=female)	-.019	-.019	-.595		
Race (1=Afro American, 2= Caucasian, 3=Other)	.046	.041	1.323		
Same Race Teachers (1-Most, 2=Half, 3=Less than half, 4=none)	.000	.001	.039		
Years of Math (1=4 yrs, 2=3yrs, 3=2yrs, 4=1 or less)	.004	.006	.166		
Years of English (1=4yrs, 2=3yrs, 3=2yrs, 4=1 or less)	-.004	-.005	-.142		
College Plans (1=Yes, 2=No)	.040	.031	.912		
Source of Assistance in High School (1,2,3,4,5 to 1,2,3,4,5)	-.000	-.024	-.738		
Adequacy of Preparation (1=Yes, 2=No)	.006	.007	.202		
College Major (01 to 82)	.000	.018	.597		
College Minor (01 to 82)	.000	.021	.656		
Place of Origin (Parish) (01 to 65)	-.000	-.031	-.938		
Hours Attempted	-.029	-1.397	-17.044*	.359*	317
Hours Completed	.035	1.905	22.734*	.621**	317
ACT-English	.012	.112	1.201	.190**	317
ACT-Math	.009	.075	.988	.176**	317
ACT-Social Science	.009	.081	.861	.288**	317

Independent Variables(a)	B(b)	Beta(c)	t	r	N
ACT-Natural Science	.008	.071	.820	.040	317
ACT-Composite	-.020	-.122	-.535	.212**	317
Constant	1.725				
F (equation)		44.097*			
R square			.727		

(a) Source of Assistance: (0=none, 1, 1=counselor, 2=teacher, 3=parent/rel, 4=other, and all possible combinations)

College major: (01=Business to 82 = Industrial Technology)

College minor: (01=Business to 82 = Industrial Technology)

Parish (Place to origin): (01=Acadia Parish, LA to 65 = Out of State)

(b)Unstandardized regression coefficient

(c) Standardized regression coefficient

* Significant at the .05 and .01 level (two tailed)

** Significant at the .01 level

Appendix A

QUESTIONNAIRE

ACADEMIC SKILLS CENTER

Name of High School_____

City, State, Zip_____, _____, _____

YOUR NAME:_____
Last First Middle

SS#_____

PLEASE CHECK APPROPRIATE RESPONSE.

Male ( ) Female ( )

Race: African-American ( ) Caucasian ( ) Other ( )

1. How many of your high school teachers were of the same race as you?

___Most of them

___Half of them

___Less than half

___None of them

2. How many years during high school did you take at least one math course?

___four years

___three years

___two years

___one or less year

3. How many years during high school did you take at least one English course?

___four years

___three years

___two years

___one or less year

Questionnaire continued:
Page 2

4. Did you plan to go to college during high school?

   _____Yes _____No

5. Who during high school assisted you in getting in college?

   ___the counselor

   ___a teacher

   ___parent(s) or other relative

   ___Other

6. Do you feel that your high school adequately prepared you for college?

   _____Yes _____No

7. Please list the subject area in which you intend to major and minor.

   Major_____

   Minor_____

8. Think of the **BEST** teacher that you have ever had. What one word would describe the thing that made the teacher a "good" teacher and list it below.

Thanks for your assistance. Please give the completed form to your teacher.